

WHAT IS CLAIMED IS:

1. An acoustical enclosure comprising:

a speaker box comprising walls that enclose an acoustic chamber;

a partitioning wall coupled to interior surfaces of said walls of said speaker box, said partitioning wall dividing said acoustic chamber into a first chamber and into a second chamber;

wherein at least one wall of said walls that enclose said acoustic chamber comprises portions that form an external vent to said second chamber;

a first speaker mounted within said partitioning wall, wherein a front portion of said first speaker has access to said first chamber and a back portion of said first speaker has access to said second chamber; and

a second speaker mounted within one of said walls that enclose said acoustic chamber, wherein a front portion of said second speaker has access to air outside said speaker box and a back portion of said second speaker has access to said first chamber.

1 2. An acoustical enclosure as claimed in Claim 1 wherein
2 said partitioning wall comprises portions that form an internal
3 vent between said first chamber and said second chamber.

1 3. An acoustical enclosure as claimed in Claim 1 wherein
2 said first speaker and said second speaker are connected in phase
3 electrically.

1 4. An acoustical enclosure as claimed in Claim 3 wherein
2 said partitioning wall comprises portions that form an internal
3 vent between said first chamber and said second chamber.

1 5. An acoustical enclosure as claimed in Claim 1 wherein a
2 volume of said first chamber is effectively increased due to the
3 presence of said second speaker within one of said walls that
4 enclose said acoustic chamber.

1 6. An acoustical enclosure as claimed in Claim 5 wherein
2 said partitioning wall comprises portions that form an internal
3 vent between said first chamber and said second chamber.

1 7. An acoustical enclosure as claimed in Claim 1 having a
2 low frequency response range that extends to approximately thirty
3 Hertz.

1 8. An acoustical enclosure as claimed in Claim 7 wherein
2 said partitioning wall comprises portions that form an internal
3 vent between said first chamber and said second chamber.

1 9. An acoustical enclosure comprising:

2 a speaker box comprising walls that enclose an acoustic
3 chamber;

4 a partitioning wall coupled to interior surfaces of said walls
5 of said speaker box, said partitioning wall dividing said acoustic
6 chamber into a first chamber and into a second chamber;

7 wherein at least one wall of said walls that enclose said
8 acoustic chamber comprises portions that form an external vent to
9 said second chamber;

10 a first speaker mounted within said partitioning wall, wherein
11 a front portion of said first speaker has access to said first
12 chamber and a back portion of said first speaker has access to said
13 second chamber; and

14 a second speaker mounted within one of said walls that enclose
15 said acoustic chamber, wherein a front portion of said second
16 speaker has access to air outside said speaker box and a back
17 portion of said second speaker has access to said first chamber;

18 wherein said second speaker enhances acoustical performance of
19 said acoustic chamber of said acoustical enclosure by extending a
20 range of low frequency response of said acoustical enclosure to
21 approximately thirty Hertz.

1 10. An acoustical enclosure as claimed in Claim 9 wherein
2 said partitioning wall comprises portions that form an internal
3 vent between said first chamber and said second chamber.

11. A method for enhancing acoustical performance of a dual chamber acoustical enclosure, said method comprising the step of: extending a range of low frequency response of said dual chamber acoustical enclosure to approximately thirty Hertz.

12. A method as claimed in Claim 11 wherein said step of extending a range of low frequency response of said dual chamber acoustical enclosure to approximately thirty Hertz comprises the steps of:

placing a first speaker within a partitioning wall that separates a first chamber and a second chamber of said dual chamber acoustical enclosure, wherein a front portion of said first speaker has access to said first chamber and a back portion of said first speaker has access to said second chamber of said dual chamber acoustical enclosure;

placing a second speaker within a wall of said first chamber of said dual chamber acoustical enclosure, wherein a front portion of said second speaker has access to air outside said dual chamber acoustical enclosure and a back portion of said second speaker has access to said first chamber of said dual chamber acoustical enclosure; and

electrically connecting said first speaker and said second speaker in phase.

1 13. A method as claimed in Claim 12 further comprising the
 2 step of:
 3 placing an internal vent in said partitioning wall between
 4 said first chamber and said second chamber.

1 14. A method as claimed in Claim 12 further comprising the
 2 step of:
 3 effectively increasing a volume of said first chamber due to
 4 the presence of said second speaker within said wall of said first
 5 chamber of said dual chamber acoustical enclosure.

1 15. A method as claimed in Claim 14 further comprising the
 2 step of:
 3 placing an internal vent in said partitioning wall between
 4 said first chamber and said second chamber.